

UVR-60/60P

SERVICE MANUAL

US Model
Canadian Model
UVR-60

AEP Model
UK Model
UVR-60P

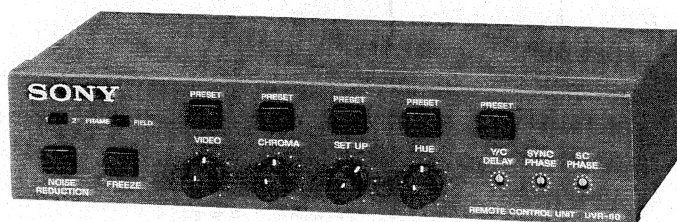


Photo : UVR-60

SPECIFICATIONS

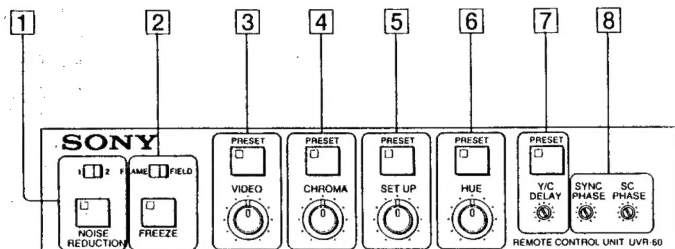
| | |
|-----------------------|--|
| Power requirements | DC (supplied from the VCR connected to this unit) |
| Power consumption | ± 35 mA |
| Operating temperature | 0°C to 40°C (32°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to 140°F) |
| Mass | Approx. 1.3 kg (6 lb 10 oz) |
| Dimensions | Approx. 215 x 44 x 101 mm (w/h/d) (8 1/2 x 1 3/4 x 4 inches) not including projecting parts and controls |
| Supplied accessories | Remote control cable (5 m) (196 7/8 inches) x 1 Blank panel x 1 Rack mount bracket x 1 Screw for rack mount bracket use x 4 Pad x 4 |

Design and specifications are subject to change without notice.

REMOTE CONTROL UNIT
SONY®

Location and Function of Parts and Controls

Front Panel (The illustration is that of the UVR-60.)



- 1 NOISE REDUCTION button and mode selector**
As long as the indicator on the button is lit, the noise reduction function operates.
While watching the playback picture, set the mode selector to position "1" or "2" whichever provides the preferable noise reduction level.
1 : Noise reduction effect is weak.
2 : Noise reduction effect is strong.

- 2 FREEZE button and mode selector**
As long as the indicator on the button is lit, the playback picture freezes.
Set the mode selector to "FRAME" or "FIELD" to choose the mode of the frozen picture.
FRAME: The playback picture freezes as a frame image.
FIELD : The playback picture freezes as a field image.

- 3 VIDEO control and PRESET button**
You can control the video level of the output video signal.
As long as the indicator on the PRESET button is lit, the video level of the output video signal is controlled to the default level.
The controls **4** - **7** also have preset levels. As long as the indicator on the PRESET button is lit, the corresponding control is adjusted to the default level.

- 4 CHROMA control and PRESET button**
You can control the chroma level of the output video signal.

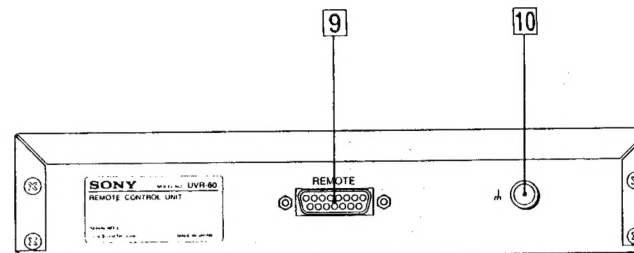
- 5 SET UP control and PRESET button (BLACK LEVEL control and PRESET button)**
You can control the direct current level of the output video signal.

- 6 HUE control and PRESET button (BURST/CHROMA control and PRESET button)**
You can control the hue of the output video signal.

- 7 Y/C DELAY control and PRESET button**
You can adjust the Y/C delay level.

- 8 SYNC PHASE control and SC PHASE control**
- You can adjust precisely the phase of the output video signal to that of the reference signal.
 - You can adjust the phase of the output video signal while giving your recording special effects such as fade-in, fade-out and dissolving effects by using an editing machine or two VCRs or more.
- SYNC PHASE control: You can adjust the sync phase of the output video signal.
- SC PHASE control: You can adjust sub-carrier phase of the output video signal.

Rear Panel (The illustration is that of the UVR-60.)



- 9 REMOTE connector**
Connect to the TBC REMOTE or REMOTE connector of the VCR, using the supplied remote control cable.

- 10 ground terminal**
Connect a grounding wire.

- For the adjusting range of controls **3** - **8**, refer to the operation manual of the equipment connected to this unit.
- For the controls **5** and **6**, names in parentheses are for the UVR-60P.

Introduction

The UVR-60/60P is a remote control unit for the time base corrector ("TBC" hereinafter) built in a Betacam series VCR or a Hi8 series VCR. It also controls the digital noise reducer remotely.

The UVR-60 is a model for the NTSC color system, and the UVR-60P for the PAL color system.

Controllable units

Model number with (P): for UVR-60P

- Betacam series VCRs:
PVW-2800(P), PVW-2650(P), PVW-2600(P),
UVW-1800(P), UVW-1600(P)
and their succeeded models having a built-in TBC.
- Hi8 series VCRs:
EVO-9850(P)
and its succeeded models having a built-in TBC.
- Other VCRs having a built-in TBC and a REMOTE connector.

Controllable functions

O : Possible to control X : Not possible to control

| UVR-60 | UVR-60P | PVW series | UVW series | EVO series |
|-----------------|-----------------|------------|------------|------------|
| VIDEO | VIDEO | O | O | O |
| CHROMA | CHROMA | O | O | O |
| SET UP | BLACK LEVEL | O | O | O |
| HUE | BURST/CHROMA | O | O | O |
| Y/C DELAY* | Y/C DELAY* | O | O | X |
| SYNC PHASE | SYNC PHASE | O | O | O |
| SC PHASE | SC PHASE | O | O | O |
| FREEZE | FREEZE | X | X | O |
| NOISE REDUCTION | NOISE REDUCTION | X | X | O |

* Even if the VCR connected to this unit does not have the function to control the Y/C DELAY, the Y/C DELAY PRESET indicator lights up when you press the Y/C DELAY PRESET button.

Preset function

The controls other than SYNC PHASE and SC PHASE have a preset level. As long as the indicator on the PRESET button is lit, the corresponding control is adjusted to the default level automatically.

Button with an indicator

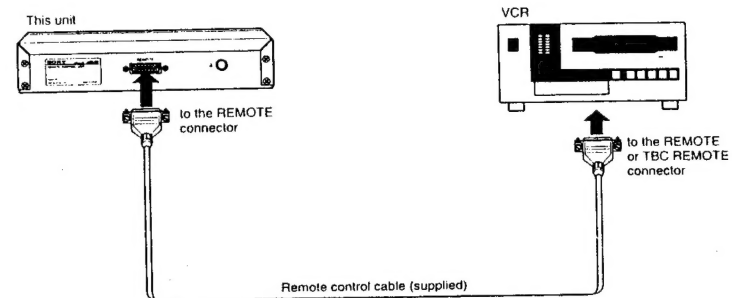
Each button has an indicator which helps you operate the unit under low light conditions.

3-way rack mounting

The unit can be installed into a 19-inch standard rack in three ways. For details, refer to page 5.

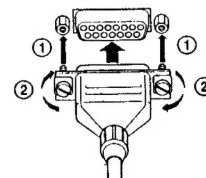
Making Connections

- Turn off the power of the VCR connected to this unit before making any connection.
- If the VCR connected to this unit has a REMOTE/LOCAL selector, set it to "REMOTE".

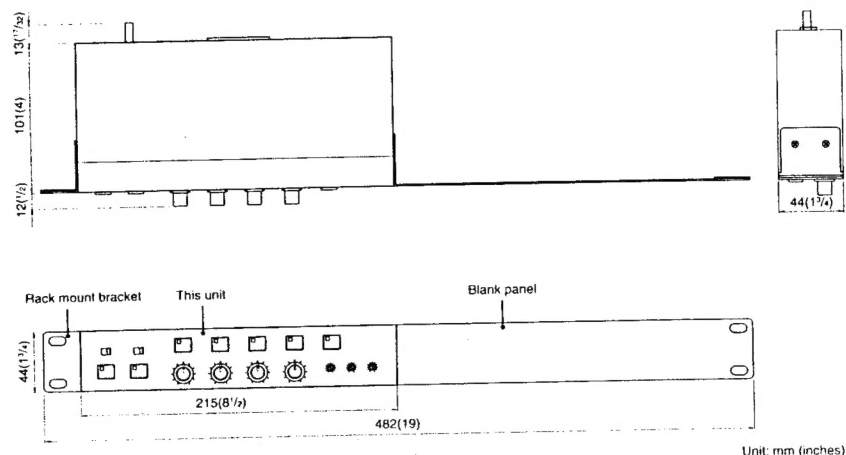


How to connect the connectors

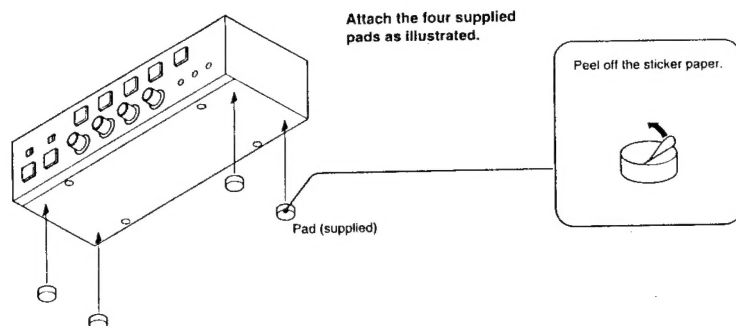
- Insert the connectors to the REMOTE connector on this unit and the REMOTE or TBC REMOTE connector on the VCR.
- Fasten the screws to fix the connectors.



Dimensions



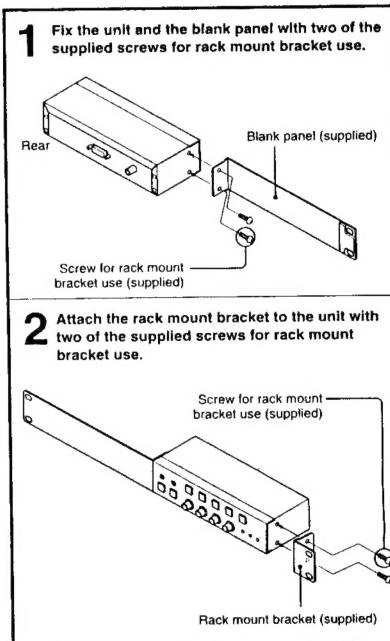
Placing the Unit on a Shelf, etc.



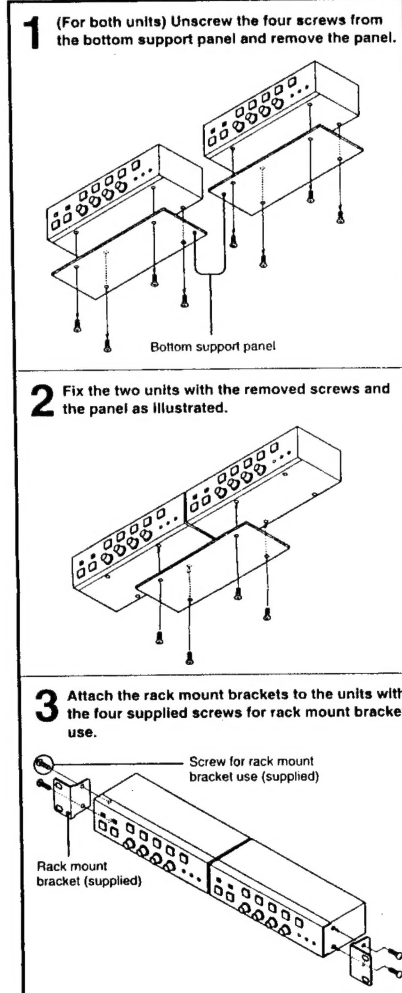
Installing the Unit into a Rack

When Installing One UVR-60/60P into a Rack

You can install the unit either on the left or right of the rack. We will describe how to install the unit on the right as you face the rack.

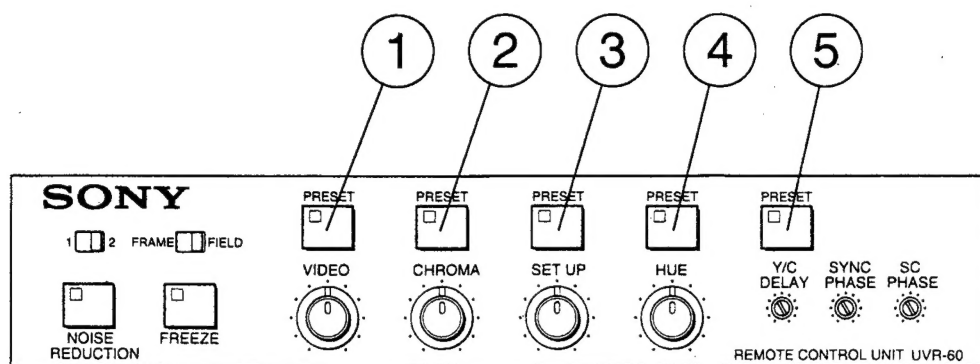


When Installing Two UVR-60/60P Units into a Rack



Note
When attaching the supplied rack mount bracket, make sure to use the supplied screws for rack mount bracket use.

Regarding the Power (± DC) Supply Check Function



This unit (UVR-60/60P) is equipped with a power (± DC) supply check function. This function makes it possible to check whether power is promptly supplied via the remote control cable from the VCR connected to this unit. The power (± DC) supply differs according to the VCR used.

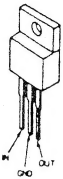
| Button | When turned ON | Power Supply |
|--------|----------------|--------------------------------|
| ① | Lights | + DC is supplied to this unit. |
| ② | Lights | |
| ③ | Lights | – DC is supplied to this unit. |
| ④ | Lights | |
| ⑤ | Lights | |

SECTION 2
DIAGRAMS

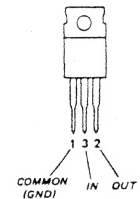
2-1. PRINTED WIRING BOARDS

• SEMICONDUCTOR LEAD
LAYOUTS

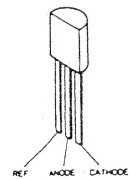
NJM78M05FA



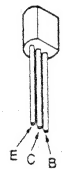
NJM79M05FA



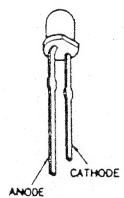
NJM431L



2SC2362K-G



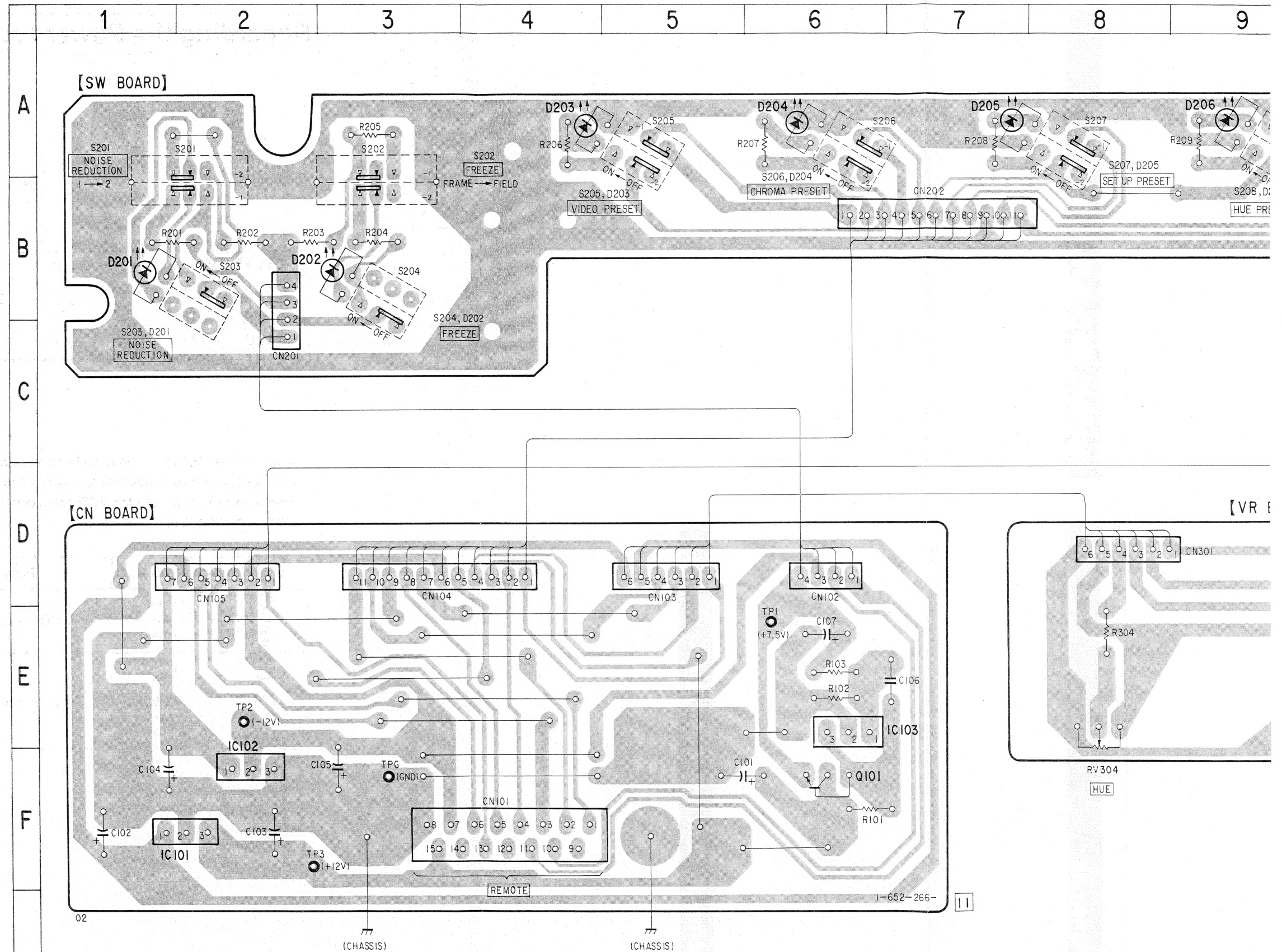
SLH34YC3F

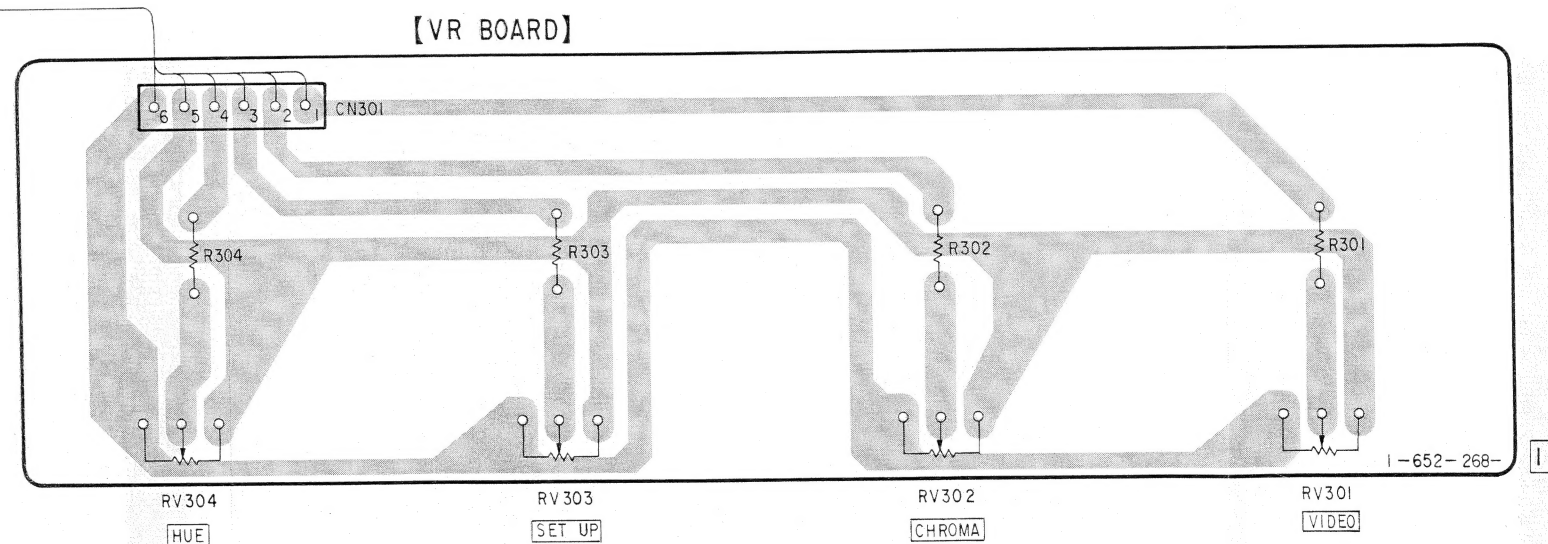
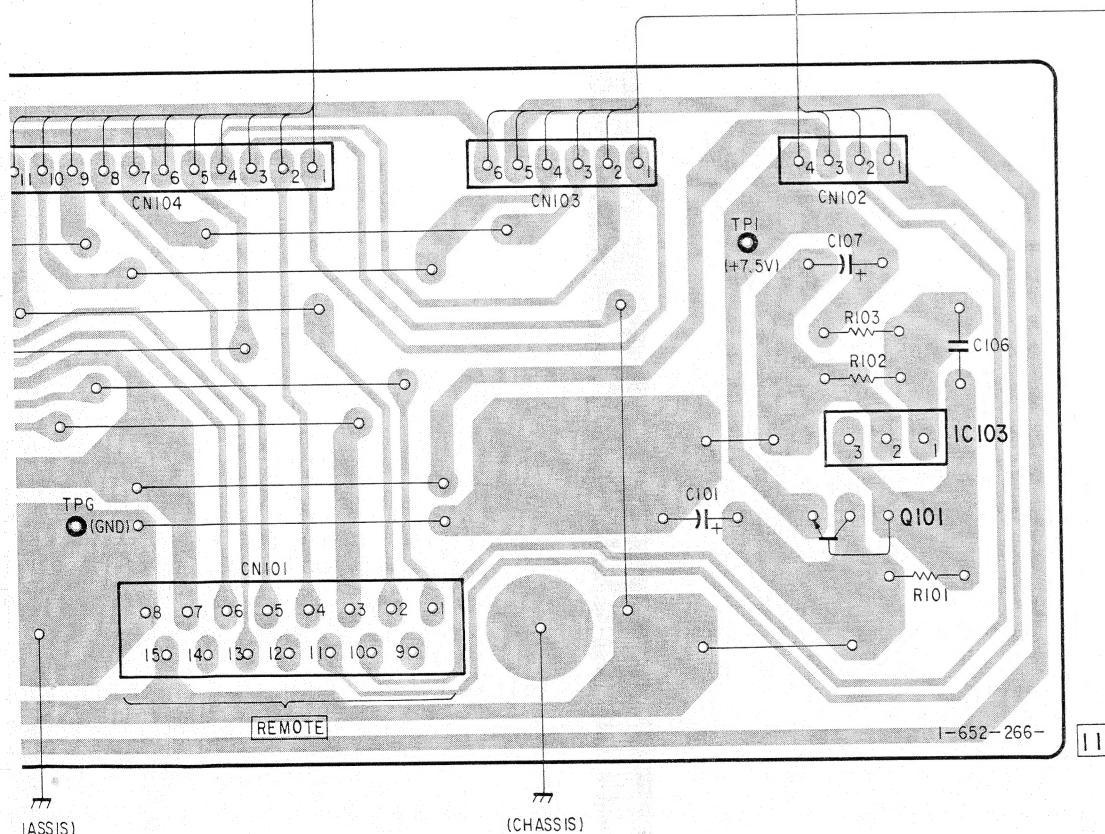
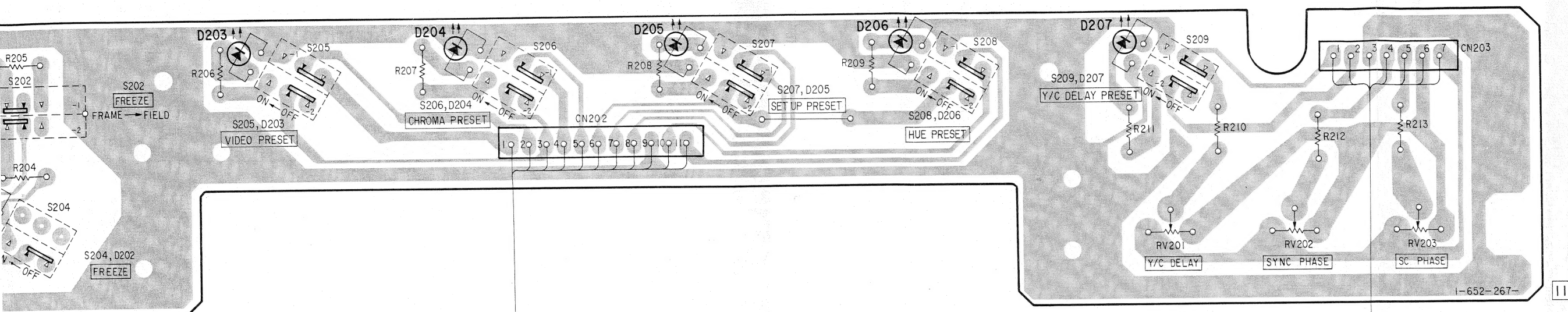
• SEMICONDUCTOR
LOCATION

| Ref. No. | Location |
|----------|----------|
| D201 | B - 1 |
| D202 | B - 3 |
| D203 | A - 4 |
| D204 | A - 6 |
| D205 | A - 7 |
| D206 | A - 9 |
| D207 | A - 10 |
| IC101 | F - 1 |
| IC102 | F - 2 |
| IC103 | E - 6 |
| Q101 | F - 6 |

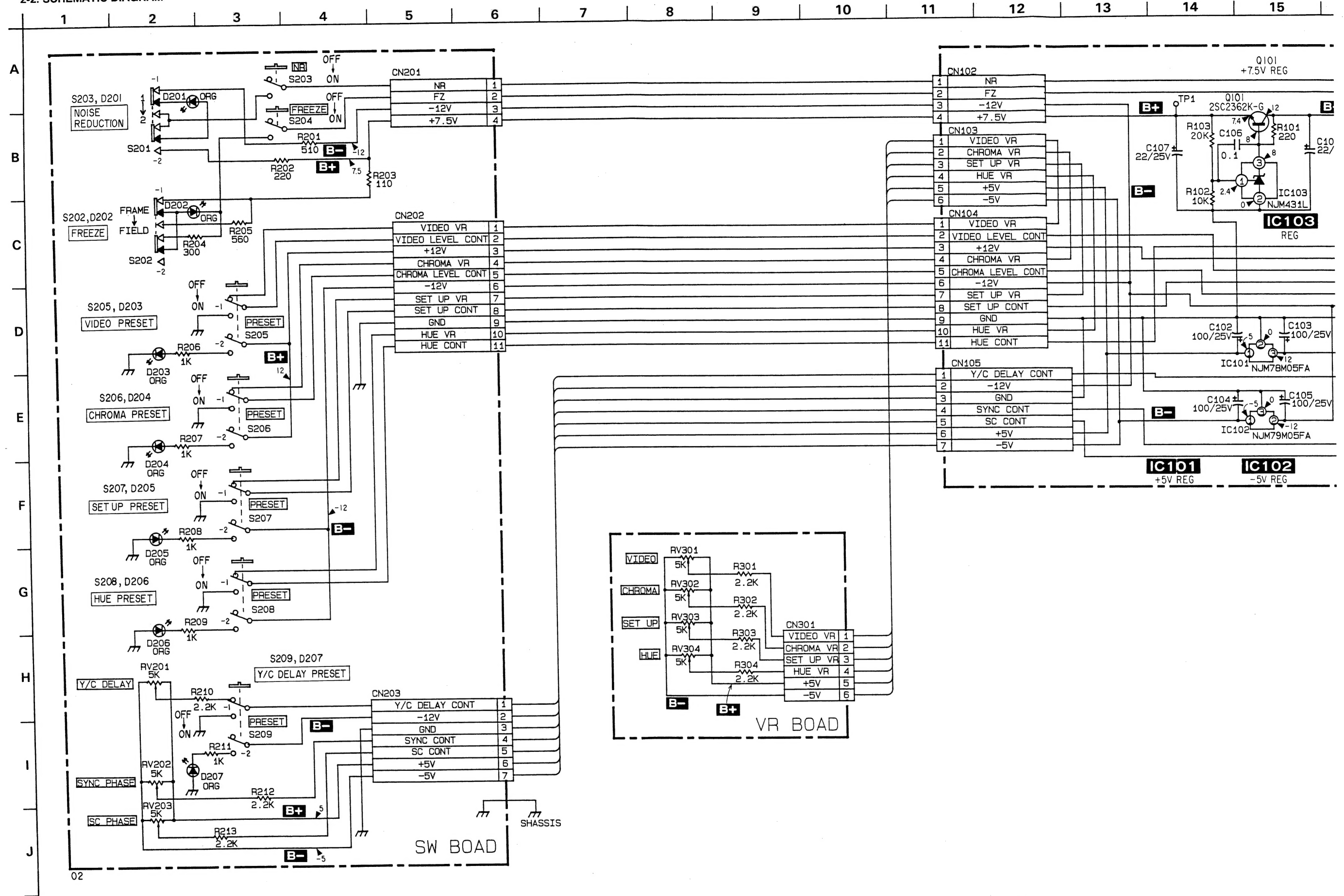
Note:

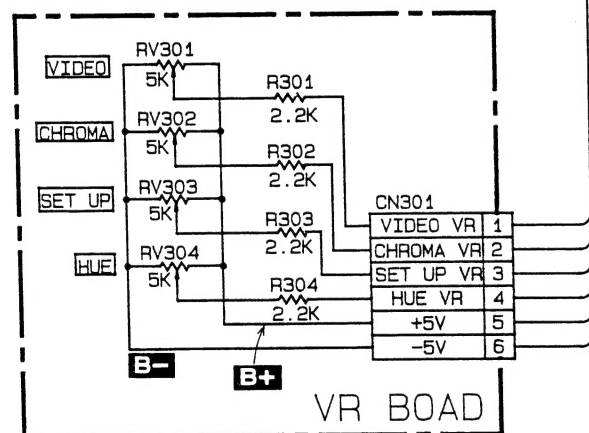
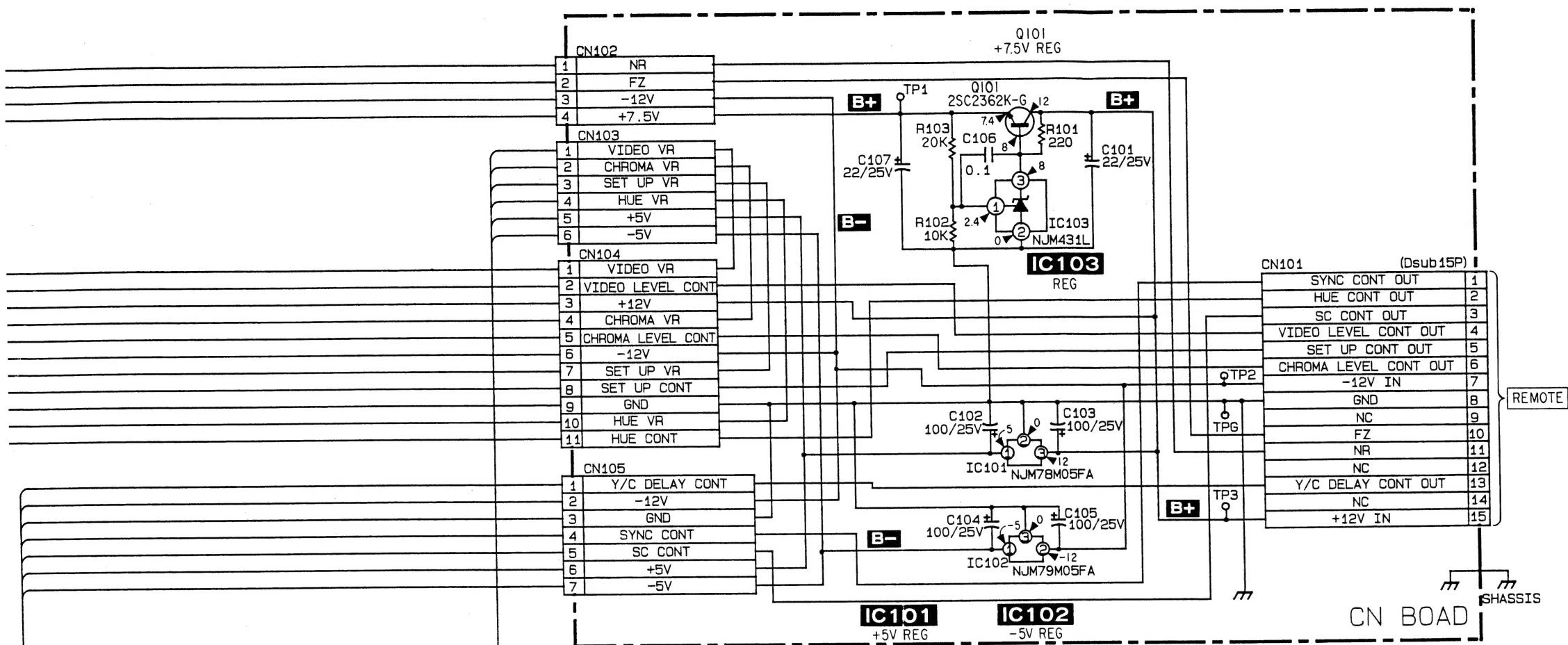
- : parts extracted from the component side.
- ⊙ : Pattern on the side which is seen.





2-2. SCHEMATIC DIAGRAM





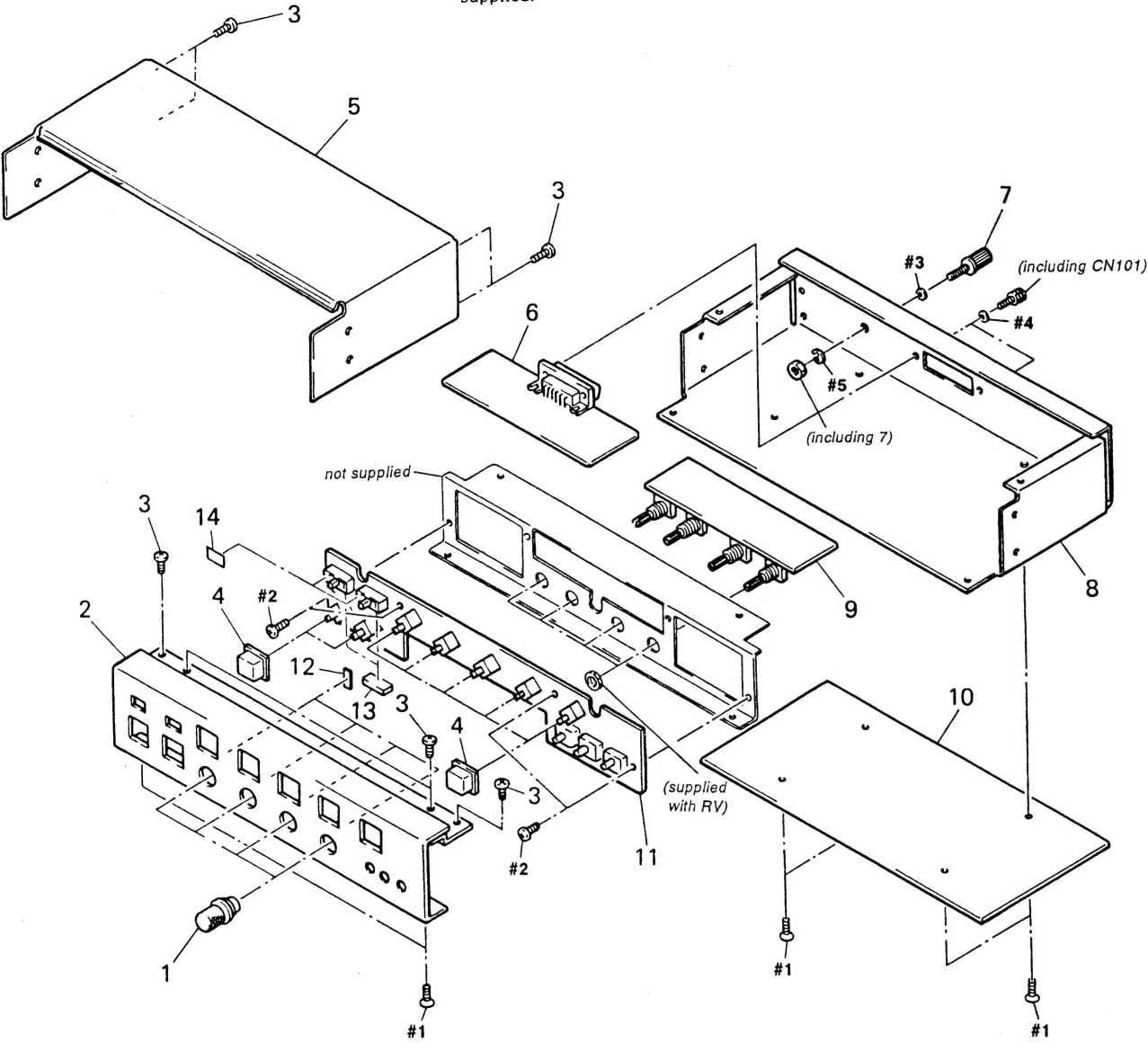
Note :

- All capacitors are in μ F unless otherwise noted. pF: μ μ F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- **B+** : B+ Line
- **B-** : B- Line
- Stable power of DC -12V is supplied to pin ⑦ of the REMOTE connector and DC +12V is supplied to pin ⑮.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.

SECTION 3
EXPLODED VIEW

NOTE:
● -XX, -X mean standardized parts, so they may have some difference from the original one.
● The construction parts of an assembled part are indicated with a collation number in the remark column.

● Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
● The mechanical parts with no reference number in the exploded views are not supplied.



| Ref.No. | Part No. | Description | Remark | Ref.No. | Part No. | Description | Remark |
|---------|--------------|-------------------------------|--------|---------|--------------|-----------------------------|--------|
| 1 | X-3717-237-1 | KNOB ASSY, VOL | | * 10 | 2-338-854-01 | PLATE, BOTTOM | |
| 2 | X-2335-344-1 | FRONT BLOCK ASSY(US, Candian) | | * 11 | A-4588-652-A | SW BOARD, COMPLETE | |
| 2 | X-2335-345-1 | FRONT BLOCK ASSY(AEP, UK) | | 12 | 9-911-815-03 | SPACER (D) | |
| 3 | 4-804-160-21 | SCREW, SELF-TAPPING, +B 3X6 | | * 13 | 2-338-862-01 | SHEET, RUBBER | |
| 4 | 2-338-851-01 | BUTTON, PUSH | | * 14 | 2-338-863-01 | LABEL | |
| * 5 | 2-338-855-01 | CASE (UPPER) | | #1 | 7-682-247-09 | SCREW +K 3X6 | |
| * 6 | 1-652-266-11 | CN BOARD | | #2 | 7-682-547-09 | SCREW (M3X6), S TITE, + BTT | |
| 7 | 1-535-691-11 | TERMINAL | | #3 | 7-623-956-51 | WASHER 5.0, FIBER | |
| * 8 | 2-338-857-01 | CASE (LOWER) (US, Canadian) | | #4 | 7-623-422-07 | LW 3 TYPE (B) | |
| * 8 | 2-338-857-11 | CASE (LOWER) (AEP, UK) | | #5 | 7-623-423-07 | LW 4, TYPE B | |
| * 9 | 1-652-268-11 | VR BOARD | | | | | |

SECTION 4
ELECTRICAL PARTS LIST

CN SW

SW VR

When indicating parts by reference number, please include the board.

NOTE:
● Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
● -XX, -X mean standardized parts, so they may have some difference from the original one.
● RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal oxide-film resistor
F : nonflammable

● Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
● SEMICONDUCTORS
In each case, u : μ , for example :
uA..... : μ A..... , uPA..... : μ PA.....
uPB..... : μ PB..... , uPC..... : μ PC.....
uPD..... : μ PD.....
● CAPACITORS
uF : μ F
● COILS
uH : μ H

| Ref.No. | Part No. | Description | Remark |
|----------------|--------------|--|--------|
| * | 1-652-266-11 | CN BOARD ***** | |
| < CAPACITOR > | | | |
| C101 | 1-126-233-11 | ELECT 22uF 20% 50V | |
| C102 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C103 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C104 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C105 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C106 | 1-136-165-00 | FILM 0.1uF 5% 50V | |
| C107 | 1-126-233-11 | ELECT 22uF 20% 50V | |
| < CONNECTOR > | | | |
| CN101 | 1-563-794-11 | CONNECTOR, D-SUB(RECEPTACLE)15P (REMOTE) | |
| * CN102 | 1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P | |
| * CN103 | 1-564-708-11 | PIN, CONNECTOR (SMALL TYPE) 6P | |
| * CN104 | 1-564-713-11 | PIN, CONNECTOR (SMALL TYPE)11P | |
| * CN105 | 1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P | |
| < IC > | | | |
| IC101 | 8-759-701-56 | IC NJM78M05FA | |
| IC102 | 8-759-701-65 | IC NJM79M05FA | |
| IC103 | 8-759-711-96 | IC NJM431L | |
| < TRANSISTOR > | | | |
| Q101 | 8-729-800-32 | TRANSISTOR 2SC2362K-G | |
| < RESISTOR > | | | |
| R101 | 1-215-405-00 | METAL 220 1% 1/6W | |
| R102 | 1-215-445-00 | METAL 10K 1% 1/6W | |
| R103 | 1-215-452-00 | METAL 20K 1% 1/6W | |
| ***** | | | |

| Ref.No. | Part No. | Description | Remark |
|-----------------------|--------------|---------------------------------|--------|
| * | A-4588-652-A | SW BOARD, COMPLETE ***** | |
| * | 2-338-863-01 | LABEL | |
| < DIODE > | | | |
| D201 | 8-719-945-13 | LED SLH34YC3F(NOISE REDUCTION) | |
| D202 | 8-719-945-13 | LED SLH34YC3F(FREEZ) | |
| D203 | 8-719-945-13 | LED SLH34YC3F(VIDEO PRESET) | |
| D204 | 8-719-945-13 | LED SLH34YC3F(CHROMA PRESET) | |
| D205 | 8-719-945-13 | LED SLH34YC3F(SET UP PRESET) | |
| D206 | 8-719-945-13 | LED SLH34YC3F(HUE PRESET) | |
| D207 | 8-719-945-13 | LED SLH34YC3F(Y/C DELAY PRESET) | |
| < RESISTOR > | | | |
| R201 | 1-249-442-11 | CARBON 510 5% 1/4W | |
| R202 | 1-249-409-11 | CARBON 220 5% 1/4W | |
| R203 | 1-215-398-00 | METAL 110 1% 1/6W | |
| R204 | 1-215-408-00 | METAL 300 1% 1/6W | |
| R205 | 1-215-415-00 | METAL 560 1% 1/6W | |
| R206 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R207 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R208 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R209 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R210 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R211 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R212 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R213 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| < VARIABLE RESISTOR > | | | |
| RV201 | 1-223-663-11 | RES, VAR, CERMET 5K(Y/C DELAY) | |
| RV202 | 1-223-663-11 | RES, VAR, CERMET 5K(SYNC PHASE) | |
| RV203 | 1-223-663-11 | RES, VAR, CERMET 5K(SC PHASE) | |

| Ref.No. | Part No. |
|---------|-----------|
| S201 | 1-572-562 |
| S202 | 1-572-562 |
| S203 | 1-554-419 |
| S204 | 1-554-419 |
| S205 | 1-554-419 |
| S206 | 1-554-419 |
| S207 | 1-554-419 |
| S208 | 1-554-419 |
| S209 | 1-554-419 |
| ***** | |
| * | 1-652-268 |
| R301 | 1-249-421 |
| R302 | 1-249-421 |
| R303 | 1-249-421 |
| R304 | 1-249-421 |
| RV301 | 1-223-662 |
| RV302 | 1-223-662 |
| RV303 | 1-223-662 |
| RV304 | 1-223-662 |
| ***** | |
| 7 | 1-535-691 |
| ***** | |
| | ACCESSO |
| ***** | |
| | 1-765-366 |
| * | 2-335-473 |
| | 2-338-841 |
| | 2-338-864 |
| | 7-682-548 |
| * | X-2335-33 |
| * | X-2335-33 |

SECTION 4 ELECTRICAL PARTS LIST

CN

SW

SW

VR

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F: nonflammable

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In each case, u: μ , for example:
uA.....: μ A....., uPA.....: μ PA.....
uPB.....: μ PB....., uPC.....: μ PC.....
uPD.....: μ PD.....
- CAPACITORS
uF: μ F
- COILS
uH: μ H

When indicating parts by reference number, please include the board.

| Ref.No. | Part No. | Description | Remark |
|---------|--------------|--|--------|
| * | 1-652-266-11 | CN BOARD ***** | |
| | | < CAPACITOR > | |
| C101 | 1-126-233-11 | ELECT 22uF 20% 50V | |
| C102 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C103 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C104 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C105 | 1-124-478-11 | ELECT 100uF 20% 25V | |
| C106 | 1-136-165-00 | FILM 0.1uF 5% 50V | |
| C107 | 1-126-233-11 | ELECT 22uF 20% 50V | |
| | | < CONNECTOR > | |
| CN101 | 1-563-794-11 | CONNECTOR, D-SUB (RECEPTACLE) 15P (REMOTE) | |
| * CN102 | 1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P | |
| * CN103 | 1-564-708-11 | PIN, CONNECTOR (SMALL TYPE) 6P | |
| * CN104 | 1-564-713-11 | PIN, CONNECTOR (SMALL TYPE) 11P | |
| * CN105 | 1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P | |
| | | < IC > | |
| IC101 | 8-759-701-56 | IC NJM78M05FA | |
| IC102 | 8-759-701-65 | IC NJM79M05FA | |
| IC103 | 8-759-711-96 | IC NJM431L | |
| | | < TRANSISTOR > | |
| Q101 | 8-729-800-32 | TRANSISTOR 2SC2362K-G | |
| | | < RESISTOR > | |
| R101 | 1-215-405-00 | METAL 220 1% 1/6W | |
| R102 | 1-215-445-00 | METAL 10K 1% 1/6W | |
| R103 | 1-215-452-00 | METAL 20K 1% 1/6W | |
| ***** | | | |

| Ref.No. | Part No. | Description | Remark |
|---------|--------------|----------------------------------|--------|
| * | A-4588-652-A | SW BOARD, COMPLETE ***** | |
| * | 2-338-863-01 | LABEL | |
| | | < DIODE > | |
| D201 | 8-719-945-13 | LED SLH34YC3F (NOISE REDUCTION) | |
| D202 | 8-719-945-13 | LED SLH34YC3F (FREEZ) | |
| D203 | 8-719-945-13 | LED SLH34YC3F (VIDEO PRESET) | |
| D204 | 8-719-945-13 | LED SLH34YC3F (CHROMA PRESET) | |
| D205 | 8-719-945-13 | LED SLH34YC3F (SET UP PRESET) | |
| D206 | 8-719-945-13 | LED SLH34YC3F (HUE PRESET) | |
| D207 | 8-719-945-13 | LED SLH34YC3F (Y/C DELAY PRESET) | |
| | | < RESISTOR > | |
| R201 | 1-249-442-11 | CARBON 510 5% 1/4W | |
| R202 | 1-249-409-11 | CARBON 220 5% 1/4W | |
| R203 | 1-215-398-00 | METAL 110 1% 1/6W | |
| R204 | 1-215-408-00 | METAL 300 1% 1/6W | |
| R205 | 1-215-415-00 | METAL 560 1% 1/6W | |
| R206 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R207 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R208 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R209 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R210 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R211 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R212 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R213 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| | | < VARIABLE RESISTOR > | |
| RV201 | 1-223-663-11 | RES, VAR, CERMET 5K (Y/C DELAY) | |
| RV202 | 1-223-663-11 | RES, VAR, CERMET 5K (SYNC PHASE) | |
| RV203 | 1-223-663-11 | RES, VAR, CERMET 5K (SC PHASE) | |

| Ref.No. | Part No. | Description | Remark |
|---------|--------------|--|--------|
| | | < SWITCH > | |
| S201 | 1-572-562-11 | SWITCH, SLIDE (NOISE REDUCTION 1/2) | |
| S202 | 1-572-562-11 | SWITCH, SLIDE (FREEZE FRAME/FIELD) | |
| S203 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (NOISE REDUCTION) | |
| S204 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (FREEZE) | |
| S205 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (VIDEO PRESET) | |
| S206 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (CHROMA PRESET) | |
| S207 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (SET UP PRESET) | |
| S208 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (HUE PRESET) | |
| S209 | 1-554-419-00 | SWITCH, PUSH (1 KEY) (Y/C DELAY PRESET) | |
| ***** | | | |
| * | 1-652-268-11 | VR BOARD ***** | |
| | | < RESISTOR > | |
| R301 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R302 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R303 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R304 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| | | < VARIABLE RESISTOR > | |
| RV301 | 1-223-662-11 | RES, VAR, CARBON 5K (VIDEO) | |
| RV302 | 1-223-662-11 | RES, VAR, CARBON 5K (CHROME) | |
| RV303 | 1-223-662-11 | RES, VAR, CARBON 5K (SET UP) | |
| RV304 | 1-223-662-11 | RES, VAR, CARBON 5K (HUE) | |
| ***** | | | |
| | | MISCELLANEOUS ***** | |
| 7 | 1-535-691-11 | TERMINAL | |
| ***** | | | |
| | | ACCESSORIES & PACKING MATERIALS ***** | |
| | | 1-765-366-12 CABLE, D-SUB 15P (5m) (REMOTE CONTROL CABLE) | |
| * | 2-335-473-01 | BRACKET, RACK MOUNT | |
| | 2-338-841-11 | MANUAL, INSTRUCTION (ENGLISH) | |
| | 2-338-864-01 | PAD, PROTECTION | |
| | 7-682-548-09 | SCREW +B 3X8 | |
| * | X-2335-337-1 | BRACKET ASSY, RACK MOUNT | |
| * | X-2335-339-1 | PANEL ASSY, BLANK | |